BUILD UPON Framework

An Introduction for Policy Makers & Local Authorities

The BUILD UPON Framework helps cities and local authorities measure the different benefits of building renovation in a simple and consistent manner.

Why the BUILD UPON Framework is useful

Buildings account for 36% of the EU's annual greenhouse gas emissions. Therefore, renovating existing buildings to reduce their carbon emissions is key to achieving the EU's ambition to reach climate neutrality by 2050. The majority of Europe's buildings will need upgrading.

Fortunately, building renovation at scale can help tackle many other societal challenges: reducing energy consumption and improving energy security; reducing energy poverty and improving health; boosting economies and supporting local skills and jobs.

Policy Makers

Understanding and measuring these benefits will inform a wide range of policy decisions.

- Climate change targets & strategies
- Energy infrastructure needs & investment
- Healthcare needs & costs
- Fuel poverty alleviation

Click **here** for policy recommendations and information on how EU technical assistance can be used to implement the BUILD UPON Framework.

Local Authorities

Understanding and measuring these benefits helps Local Authorities:

- Measure their progress against a broad range of targets
- Learn from mistakes and successes to inform best practice
- Build business cases for future retrofit
- Increase public awareness of building renovation benefits
- Determine future policy based on sound evidence

How the BUILD UPON Framework works

The Framework defines Environmental, Social and Economic indicators that can be measured. It shows how to measure them and provides tools to aid data collection. This helps cities and local authorities capture data in a simple but standardised format.

The Framework is flexible, easy and free to use. It covers all buildings types. It can be used at a city level - to measure impacts across an entire area and support a city's Sustainable Energy & Carbon Action Plan; or a project level - to measure the impacts of individual projects. Local Authorities can measure all of the indicators or focus on just one or two to suit their priorities and resources.

BUILD UPON FRAMEWORK	13 core INDICATORS	EXAMPLE IMPACTS (not based on real project data)
ENVIRONMENTAL	Env. 1 Energy Renovation Rate	**0.5%** of the city's housing renovated under this project. All 300 homes to nZEB standard
	Env. 2 CO2 Emissions	**1,260 ton CO2/yr saved** from heating and powering 300 homes. **60% reduction** on average
	Env. 3 Energy Consumption	Energy consumption reduced from **15,000kWh/yr** to **8,000kWh/yr** for the average home
	Env. 4 Renewable Energy Production	**900,000 kWh/yr** produced by PVs on the 300 homes, supplying almost **40%** of the homes' energy needs
SOCIAL HEALTH & WELLBEING	Soc. 1 Energy Poverty	% of households at risk of energy poverty **reduced from 25% to 3%**
	Soc. 2 Indoor Air Quality	Before renovation, many homes had damp and mould. Now, **95%** of the homes enjoy good Indoor Air Quality.
	Soc. 3 Winter Thermal Comfort	Before renovation, many homes were underheated and draughty. Now, **100%** of homes are warm and comfortable in winter
	Soc. 4 Summer Thermal Comfort	Before renovation, most homes suffered from summer overheating. Now, **60%** of homes remain comfortable in summer
ECONOMIC	Eco. 1 Investment in Energy Renovation	**€7.5m** total project cost **€25,000 spent per home on average**
	Eco. 2 Cost Efficiency of Energy Reductions	280kWh/yr saved for each €1,000 invested
	Eco. 3 Jobs in Energy Renovation	**60 FTE jobs** directly supported throughout the 18 month project
	Eco. 4 Upskilling in Energy Renovation	n/a: city level indicator only
	Eco. 5 Financial Savings from Energy Renovation	Energy bills reduced by **€400/yr** to **€900/yr** per home on average

The BUILD UPON Framework was developed by eight Green Building Councils from the Europe Regional Network of WorldGBC in partnership with Climate Alliance, the Building Performance Institute Europe and with support from over 30 local authorities across Europe.

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